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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,983	11/14/2000	Robin Harker	COLGRA P21AUS	8740

7590

04/08/2004

Davis and Bujold  
Fourth Floor  
500 N. Commercial Street  
Manchester, NH 03101

EXAMINER
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DAMIANO, ANNE L

ART UNIT	PAPER NUMBER
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2114

DATE MAILED: 04/08/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/711,983	HARKER, ROBIN	
	Examiner	Art Unit	
	Anne L Damiano	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-16 and 18-23 is/are rejected.
- 7) ☒ Claim(s) 17 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 17 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hwang et al. (5,577,205).

As in claim 13, Hwang discloses a computer system comprising:

A multiplicity of PC-CPU motherboards (CPU card) each of the multiplicity of PC-CPU motherboards includes a CPU processor having electrical circuitry interconnected with the processor, and a power-input connector connected to the circuitry for use in the supply of electrical power to power the respective motherboard (column 2: lines 51-55, column 7: lines 11-15, and column 9, lines 4-21); (Each CPU card is for it's own, distinct PC. Each PC has it's own motherboard.)

An electrical power-supply means for affording fault-tolerating redundancy for supplying electrical power (column 3: lines 14-21);

A mounting means (chassis) for mounting the motherboards together with the power supply means as a single unit (column 2: lines 51-56, column 4: lines 13-16 and figure 1: TEAMPRO CHASSIS); and

A wiring means for connecting the power-supply means in common to the power-input connectors of the motherboards for powering the motherboards in parallel with one another (column 9: lines 58-62).

As in claim 18, Hwang discloses a computer system comprising:

A multiplicity of processor modules each of the multiplicity of processor modules comprising a PC-CPU motherboard (CPU card) and a power input connector, the PC-CPU motherboard including a CPU processor and electrical circuitry interconnected with the processor, and the power-input connector being interconnected with the PC-CPU motherboard for use in the supply of electrical power to power the PC-CPU motherboard (column 2: lines 51-55, column 7: lines 11-15, and column 9, lines 4-21); (Each CPU card is for it's own, distinct PC. Each PC has it's own motherboard.)

A cabinet (chassis) housing the processor modules, the cabinet including means mounting the processor modules side-by-side with one another within the cabinet (column 2: lines 51-56, column 4: lines 13-16 and figure 1: TEAMPRO CHASSIS);

An electrical power-supply means for mounted within the cabinet (column 4: lines 13-16), the power supply means affording fault-tolerating redundancy in its supply of electrical power (column 3: lines 14-21); and

A wiring means within the cabinet for connecting the power-supply means to the power-input connectors of all the processor modules in common for powering the motherboards in parallel with one another (column 9: lines 58-62).

As in claim 19, Hwang discloses the computer system, wherein the means mounting the processor modules within the cabinet comprise a multiplicity of tracks (slots) for receiving the processor modules individually, the processor modules being mounted on respective ones of the tracks for sliding movement selectively in and out of the cabinet (column 6: lines 40-59).

As in claim 20, Hwang discloses the computer system wherein each processor module includes a hard-disk unit, and the hard-disk unit is interconnected with the PC-CPU motherboard of the respective processor module for data interchanges therewith (column 3: lines 47-48 and column 4: lines 13-16).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14, 15, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang as applied to claims 13 and 18 above, and further in view of Walker (5,848,230).

Regarding claim 14, Hwang discloses the computer system with a power supply and backup power supply affording a fault tolerating power supply above. However, Hwang does not specifically disclose the details of how the fault tolerating power supply operates.

Walker discloses a system with a fault tolerant power supply means, wherein the power supply means comprise a plurality of power-supply modules (primary, backup and spare) in parallel with one another for powering processors in parallel with one another (figure 3: components 104, 106 and 108 and column 8: lines 16-24).

It would have been obvious to a person skilled in the art at the time the invention was made to have the redundant power supply of Hwang's system power the processors in parallel, as taught by Walker. It would have been obvious because redundant power systems are known in the art (Walker, column 2: lines 48-55) and Walker specifically teaches that backup power supplies can power processors along with the primary power supply in parallel.

As in claim 15, Walker discloses the computer system wherein each power supply module includes fault responsive circuitry for responding to the occurrence of a fault within that respective power-supply module to isolate that individual power supply module from powering the motherboards (column 8: lines 21-39).

Regarding claim 21, Hwang discloses the computer system with a power supply and backup power supply affording fault tolerating power supply above. However, Hwang does not specifically disclose the details of how the fault tolerating power supply operates.

Walker discloses a system with a fault tolerant power supply means, wherein the power supply means comprise a plurality of power-supply modules (primary, backup and spare) and wiring means coupling the power-supply modules in parallel with one another for powering processors in parallel (figure 3: components 104, 106 and 108 and column 8: lines 16-24).

It would have been obvious to a person skilled in the art at the time the invention was made to have the redundant power supply of Hwang's system power the processors in parallel, as taught by Walker. It would have been obvious because redundant power systems are known in the art (Walker, column 2: lines 48-55) and Walker specifically teaches that backup power supplies can power processors along with the primary power supply in parallel.

As in claim 22, Walker discloses the computer system wherein each power supply module includes fault responsive circuitry for responding to the occurrence of a fault within that respective power-supply module to isolate that individual power supply module from supplying power to the processing modules (column 8: lines 21-39).

6. Claims 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang in view of Walker as applied to claims 15 and 22, and further in view of Lewis et al. (6,289,467).

Regarding claim 16, Hwang and Walker disclose the power-supply module including circuitry responsive to the occurrence of a fault within that respective power-supply module to isolate that individual power-supply module from supplying power to the motherboard, above. However, neither specifically discloses the circuitry isolating a power-supply module responsive to reduction in voltage output.

Lewis discloses a voltage sensor that monitors the voltage level of power-supply modules (column 1: lines 44-48) to determine the state of the power-supplies.

It would have been obvious to a person skilled in the art at the time the invention was made to include circuitry for monitoring the power-supply voltage levels as taught by Lewis, in the system taught by Hwang and Walker. It would have been obvious because Hwang and Walker teach isolating a power-supply responsive to a detected fault and Lewis teaches that a low voltage output can cause damage to processor modules (column 1: lines 35-38). A person skilled in the art would have understood that detecting voltage levels for a reduction in voltage output of the power-supply modules would be completed in Hwang and Walker's system when detecting for a power-supply fault.

Regarding claim 23, Hwang and Walker disclose the power-supply module including circuitry responsive to the occurrence of a fault within that respective power-supply module to isolate that individual power-supply module from supplying power to the processor modules, above. However, neither specifically discloses the circuitry isolating a power-supply module responsive to reduction in voltage output.



Lewis discloses a voltage sensor that monitors the voltage level of power-supply modules (column 1: lines 44-48) to determine the state of the power-supplies.

It would have been obvious to a person skilled in the art at the time the invention was made to include circuitry for monitoring the power-supply voltage levels as taught by Lewis, in the system taught by Hwang and Walker. It would have been obvious because Hwang and Walker teach isolating a power-supply responsive to a detected fault and Lewis teaches that a low voltage output can cause damage to processor modules (column 1: lines 35-38). A person skilled in the art would have understood that detecting voltage levels for a reduction in voltage output of the power-supply modules would be completed in Hwang and Walker's system when detecting for a power-supply fault.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 13-24 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne L Damiano whose telephone number is (703) 305-8010. The examiner can normally be reached on M-F 9-6:30 first Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Application/Control Number: 09/711,983  
Art Unit: 2114

Page 10

ALD



**SCOTT BADERMAN**  
**PRIMARY EXAMINER**